

Timeline

Albury airport to light up thanks to \$2.675 million grant

12:50 AM AEST

Best of both worlds – Combining classical and quantum systems to meet supercomputing demands

12:48 AM AEST

Fast-moving Afghanistan crisis 'has hallmarks of humanitarian catastrophe'

12:44 AM AEST

Recovery Centre Coming to Nunavut 14 August

12:40 AM AEST

New tumor cell tracking system aims to understand cancer treatment resistance

12:36 AM AEST

Holistic approach to materials for next generation of electrical insulation

12:22 AM AEST

Science 13 AUG 2021 11:44 PM AEST

# New algorithm can help improve cellular materials design



## Park FX40 | The Autonomous AFM

Infused with innovative robotics, intelligent learning features, safety mechanisms

Swansea University

New research published in Scientific Reports

has revealed that a simple but robust algorithm can help engineers to improve the design of cellular materials that are used in a variety of diverse applications ranging from defence, bio-medical to smart structures and the aerospace sector.

The way in which cellular materials will perform can be uncertain and so calculations to help engineers predict how they will react for a particular design, for a given set of loads, conditions and constraints, can help maximise their design and subsequent performance.

The research collaborators at the Faculty of Science and Engineering, Swansea University, Institute of Technology Delhi and Brown University, USA, found that running specialised calcula can help engineers to find the optimum micro-structure for cellular materials that are used fo wide range of purposes, from advanced aerospace applications to stents used for blocked ar

Research author Dr Tanmoy Chatterjee said:

“This paper is the result of one year of sustained collaborative research. The results illustrate uncertainties in the micro-scale can drastically impact the mechanical performance of metamaterials. Our formulation achieved novel microstructure designs by employing comput algorithms which follow the evolutionary principles of nature.”



EUPROTEIN INC - Lymphocyte-activation gene 3

EUPROTEIN high-quality validated LAG3 protein for immunoassay development euprotein.com

Learn more



Park FX40 | The Autonomous AFM

Ad Park Systems



Builder and supervisor fined for unauthorised...

miragenews.com



Robotics, Codi Engineering.

Ad Hyett Education



New Device to Stop Snoring

Ad World Lifetrend



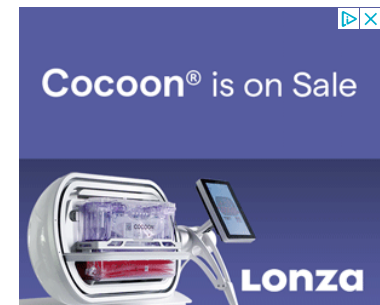
Researchers Show Avian Flu Virus Transmissibility...

miragenews.com



Taking aim at bacteria

miragenews.com



King Scallop Fishery closure to protect stocks

12:18 AM AEST

Canada supports mental health programs for Black LGBTQI+ Canadians

12:14 AM AEST

### Police charge man with drug and firearm offences at Oxley

12:13 AM AEST

### Hackers can 'poison' open-source code on internet

12:12 AM AEST

### Professional couples are on rise, but it's not increasing income inequality

12:12 AM AEST

### UN experts call for end to police brutality worldwide

12:10 AM AEST

Includes installation

Free system flush

10 year guarantee

0% APR available

**New Boiler From £1,799**

Heatforce

### Ottawa invests \$3.6 million in shoreline protection against coastal erosion in municipality of Îles-de-la-Madeleine

12:04 AM AEST

### Discovery of subset of human short introns spliced out by distinct mechanism

12:01 AM AEST

### Funding announced for pilot Inuit Stewardship program in Sanikiluaq

12:00 AM AEST

### Honourable Liza Frulla appointed Chair of Board of Directors of Destination Canada

12:00 AM AEST

### Navigating corn maze: FSU researchers develop technique to map out 'light switches' of maize genome

11:59 PM AEST

### Researchers present ultra-precise brain imaging tool

11:58 PM AEST

Co-author Professor Sondipon Adhikari explains:

"This approach allowed us to achieve extreme mechanical properties involving negative Poisson's ratio (auxetic metamaterial) and elastic modulus. The ability to manipulate extreme mechanical properties through novel optimal micro-architecture designs will open up new possibilities for manufacturing and applications."

Read the research in [Scientific Reports](#).

- Includes installation
- Free system flush
- 10 year guarantee
- 0% APR available



Get Your New Boiler For Less

Get Free Instant Quote For Your New Boiler. It Only Takes 60...

Heatforce

Open

/Public Release. This material comes from the originating organization and may be of a point-nature, edited for clarity, style and length. View in full [here](#).



Why?

Tags: Aerospace, Algorithm, Brown University, Engineering, Impact, India, Professor, research running, science, Scientific Reports, technology, U.S., university

You might also like



Park FX40 | The Autonomous AFM

Ad Park Systems



Builder and supervisor fined for unauthorised work at hotel - Jaxon Construction Pty...

miragenews.com



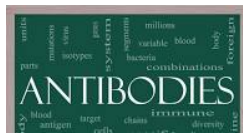
Distance learning option

Ad Institute of Acoustics



Researchers Show Avian Flu Virus Transmissibility in...

miragenews.com



SomaScan® Discovery - Measure 7,000 Proteins At...

Ad somalogic.com



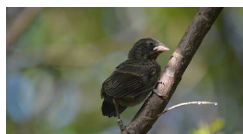
Taking aim at skin bacteria

miragenews.com



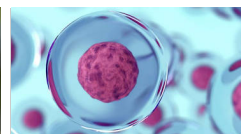
Real-Time Technology News

miragenews.com



How Galápagos finches evade parasitic fly

miragenews.com



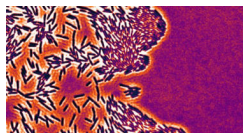
Researchers discover interior organization of nucleolus

miragenews.com



NSW latest public health alert - Interstate travel advice

miragenews.com



Bacteria navigate on surfaces using a "sense of touch"

miragenews.com



Ruben Fair, accomplished engineering expert, to lead...

miragenews.com





How consumer orchestration work creates value in sharing economy

11:56 PM AEST

Republic of Korea's National Day

11:50 PM AEST

How empty stadiums affected football during pandemic

11:50 PM AEST

Proclamation on National Employer Support Of Guard And Reserve Week, 2021

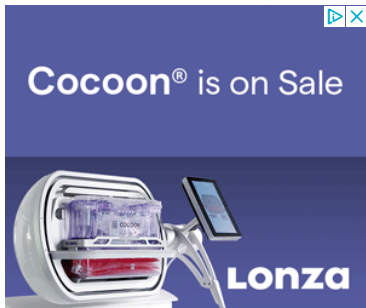
11:48 PM AEST

New algorithm can help improve cellular materials design

11:44 PM AEST

Genetic program protects neurons from degeneration

11:28 PM AEST



Polymer enables tougher recyclable thermoplastics

11:28 PM AEST

Ultra-high extinction-ratio light modulation by electrically tunable metasurfaces using dual epsilon-near-zero resonances

11:14 PM AEST

For trees, carbs are key to surviving insect defoliation

11:11 PM AEST

Cats prefer to get free meals rather than work for them

Professional couples are on rise, but it's not increasing income inequality

EPFL Wikipedia Project bolsters School's online visibility

NSW new public health – New venues of concern August



Extension of Commonwealth hotspot for Newcastle and surrounding local

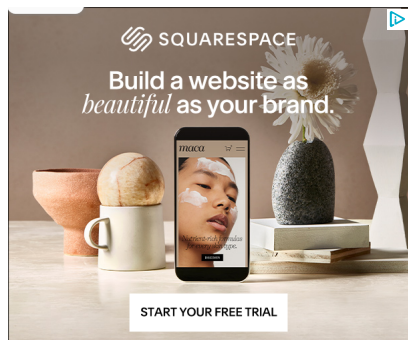


Improving health outcomes for people with intellectual disability



Coronavirus update for Victoria – Friday 13 Aug 2021

**Park SYSTEMS** **Park FX40 | The Autonomous AFM**  
Infused with innovative robotics, intelligent learning features, safety mechanisms



Popular Topics

- Australia
- Government
- police
- university
- community
- Australian
- research
- Victoria
- NSW
- business
- covid-19
- Professor
- Minister
- Queensland
- New South Wales
- environment
- council
- UK
- industry
- education
- Investment
- investigation
- local council
- health
- project
- infrastructure
- QLD
- AusPol
- crime
- coronavirus
- Aussie
- import
- Emergency
- court
- Impact
- UK Government
- future
- New Zealand
- technology
- Internet
- science
- world
- Sydney
- President
- school

[Live News Timeline](#)
[Privacy Policy](#)
[Disclaimer](#)
[Code of Ethics](#)
[Contact Us](#)
[About Us](#)
[Complaints](#)

Mirage.News real-time media portal. We acknowledge the traditional owners of country throughout Australia. All timestamps on this site are AEST/AEDT and all times in the articles are local times unless indicated otherwise. All trademarks and rights are owned by their respective owners.

All content is used for news reporting purposes. For news reporting purposes, we rely on fair use (fair dealing) <sup>[1]</sup> <sup>[2]</sup> for textual and media content to keep the p informed on the developments. If you are a person mentioned in the story or you are a copyright holder and believe that any content should be removed, revised c down, please [contact us](#). See [our disclaimer page](#).